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## Skeleton sled champion prepares for Olympic trials

by Pete Meltzer Jr., Materials and Manufacturing Directorate

WRIGHT-PATTERSON AIR FORCE BASE, Ohio — For Major Brady Canfield, an Air Force scientist, many of life's toughest questions and answers reside not in a laboratory, but in the wrenching twists and turns of a mile long downhill track made of glare ice that slips one along at 80 mph, or if the conditions are just right, even faster.

So goes it for recently crowned men's national skeleton sled racing champion and World Championships bronze medal list, Major Canfield, as he gears up for the Olympic trials and counts down the days to the 2006 Winter Games in Torino, Italy.

"The best overall position is difficult to hold," Major Canfield said. "My neck needs to be lower on the sled and my chin rotated one-half inch higher. To accomplish that, I'm enrolling in yoga to develop the specific flexibility I'll need, as well as sleeping on my stomach in the 'race' position for the next 892 days."

Major Canfield is steely-eyed at age 40, four years younger than his dad when *he* was a rodeo champion. One wonders if the junior Canfield's best days are still on the horizon. Today, in perhaps the best shape of his life, he is a super-motivated, intensely self-disciplined rising star striving for what many athletes consider the ultimate—an opportunity to represent the United States in Olympic competition.

Major Canfield's rise to national champion has been unwavering, persistent and dedicated—an adventure that has taken him around the world—including to St. Moritz, Switzerland, where skeleton racing originated more than 100 years ago. Skeleton, in fact, has spawned two Winter Olympic sports — bobsled and luge, and is now a regular event itself.

The typical skeleton sled is comprised of a steel chassis and steel runners and weighs about 95 pounds. The athlete lies face down on top of the sled in a headfirst position. The bottom of the sled or "pod" is comprised of a steel (sometimes fiberglass) sheet attached to the underside of the chassis to provide aerodynamic benefits, much like the underside of a high performance race car. The sled has no mechanical steering, braking or propulsion capability. It moves solely by the pushing force provided by the athlete at the beginning of the race and under the force of gravity as it winds through the course like a bullet, sometimes exposing a skeleton athlete to up to five Gs — forces of gravity.

Like all champions, Major Canfield has learned how to translate disappointment into motivation. At the U.S. national trials for the 2002 Winter Olympics in Salt Lake City, the rookie placed fourth, just one position shy of earning a spot on the men's



*Maj. Canfield gets off to a flying start on his skeleton sled at the top of the racing track. (Air Force photo)*

three-man squad. That loss was disheartening, but the experience of coming so close to winning and then not winning only spurred him on.

"Skeleton racing is 15 percent equipment and 85 percent you," Major Canfield said. However, even from the beginning, he has sought to optimize his odds with the best equipment. Soon after entering the sport, he succeeded in gaining the support of the Air Force Research Laboratory's Advanced Composites Office at Hill Air Force Base, Utah. Engineers there proved instrumental in redesigning the aerodynamic component of the sled, called the "pod," that helped him reach the 2002 Olympic trials.

Soon, Major Canfield will begin rocketing through downhill courses in renewed hopes of earning a spot on the men's Olympic skeleton racing team. Until then, the quest for excellence continues, not only on the track but through-

**continued on page 2**

***continued from page 1***

out the entire Materials and Manufacturing Directorate in the search for better materials and production technologies required to keep the world's best fighting force number one. @

***EDITOR'S NOTE*** - Major Canfield will try to defend his title as National Champion, when he competes in the 2004 U.S. Men's National Skeleton Championships, Lake Placid, N.Y., Feb 29 - March 8.